

Course name

Removable Prosthodontics II

Department/chair

Department of Removable Prosthodontics

Address of the department/chair

School of Dentistry University of Zagreb, Ivana Gundulića 5, 10000 Zagreb, Croatia

Mandatory or elective course

Mandatory course

Year of study

5. year

Semester

Winter and summer semester

ECTS

7 ECTS

Course leader

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Other teachers on the course

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Number of hours

	Winter semester	Summer semester	Total (winter+summer)
Lectures	15	-	15
Seminars	-	-	-
Practicals	45	45	90
Total	60	45	105

1 hour = 45 minutes

Description and aim of the course

The Removable Prosthodontics II program teaches dental students how to make partial removable dentures. The masticatory/chewing system consists of connected and dependent parts consisting of teeth as a chewing organ in the narrow sense, upper and lower jaws, masticatory muscles, auxiliary mimic and neck muscles, jaw joints, soft tissues and salivary glands, and a particular part of the nervous, blood and lymphatic systems. The condition that the function of this system is maximum is the harmony of all its parts. Loss of teeth leads to morphological, biomechanical, but also functional changes in the oral cavity. Depending on the anatomical-morphological characteristics in the oral cavity, the tasks of the removable partial dentures are ensured chewing function, achieve satisfactory aesthetics and speech function, but also take preventive action to preserve the remaining teeth, bone foundation, soft tissues and jaw joint functions. Many factors influence whether a force will be physiological stimulation or lead to pathological changes in supporting tissue (gingiva, bone, and teeth). On the one hand, it depends on the nature of the forces (magnitude, direction of action, time of action), and on the other hand, on the individual adaptation capacity of the supporting apparatus.

The curriculum of the subject **Removable Prosthodontics II** allows students to learn:

- recognize the state of partial loss of teeth in the dental arches and the consequences of this condition on the function of the masticatory system as a whole
- set an indication for the fabrication of removable partial denture after thorough diagnostics have been carried out with the aim of restoring the chewing function, phonation, and aesthetics of the patient with partial tooth loss
- know the components of partial dentures (elements of cast metal removable partial dentures) and ways of planning, designing through which satisfactory retention and stabilization of partial denture are achieved
- know materials and instruments, as well as laboratory or clinical equipment and devices for the fabrication of removable partial denture
- the way of making so called., combined removable-fixed prosthetic restorations incorporating the fabrication of removable partial denture
- know the characteristics of dental attachments (attachments, cbars, balls, double (telescopic) crowns) that are part of removable-fixed prosthetic restorations, i.e., removable partial dentures
- understand and connect the clinical and laboratory course of making removable partial denture as an independent therapeutic product and therapeutic product in the framework of the fabrication of so called., removable-fixed prosthetic restoration
- determine the type of material for the fabrication of removable partial dentures according to the clinical situation of partial edentulousness and the correctly set indication

- get acquainted with the existence of new technologies and prosthetic materials that can be used in design planning and the fabrication of removable partial denture frameworks
- introduce students to the possibility of applying dental implants with dental attachments as additional anchorages/supports for removable partial denture

Course enrolment requirements

Passed the exam in Removable Prosthodontics I is a condition for enrolling and taking the exam from Removable Prosthodontics II.

Learning outcomes at the level of the study program to which the subject contributes:

- Knowledge, skills and competencies related to professionalism, ethics and law
- Knowledge, skills and competencies related to communication and social skills
- Knowledge, skills and competencies related to basic knowledge and the ability to gather information from the literature
- Knowledge, skills and competencies related to the collection of clinical information
- Knowledge, skills and competencies related to diagnosis and therapy planning
- Knowledge, skills and competencies related to the therapy, establishment and maintenance of oral health
- Knowledge, skills and competencies related to preventive measures and health promotion

Course learning outcomes

Knowledge
1. Describe the impact and consequences of partial tooth loss on the function of the masticatory system
2. Describe the components of partial removable denture (clasps, major connectors, minor connectors, rests, bounded/free-end saddles), their role and impact on supporting tissues (tooth abutment, mucous membrane and bone tissue)
3. Describe the role, types and use of the dental surveyor in planning the design of the components of a partial metal removable denture
4. Know the types and possibilities of dental attachments (attachments, bars, double crown (telescope)) by which a partial removable denture is combined with fixed prosthetic restoration
Skills
5. Take an anatomical and functional impression in a partially edentulous patient
6. Try and check the exact fit of a metal skeleton of a partial removable denture in the mouth of a partially edentulous patient
7. Determine the jaw relationship in a partially edentulous patient indicated for the fabrication of partial removable denture
8. Check the setting of the anterior and posterior artificial prosthetic teeth in partial removable dentures in the patient's mouth
Competencies

9. Draw a construction sketch of the design of the components of a one-piece metal framework of partial metal removable denture on working models, respecting the effect of tensile and compressive load on partial removable denture, i.e., biostatic principles
10. Make a partial metal removable denture knowing the clinical and laboratory course of making the same

Course content

Lectures

	Topics – winter semester	Hours
1.	Fabrication a removable partial denture (RPD): list of lectures during the semester – introductory lecture.	1
2.	Partially edentulous patient - the consequences on masticatory system. Topographical/functional classification of partially edentulous patients (Wild, Kennedy, Eichner).	1
3.	Basic considerations of the removable partial denture (definition, indications, types of partial dentures regarding the material, retention and stabilization).	1
4.	Basic elements of the one-piece framework metal removable partial denture for itself or as a part of the fixed-removable prosthetic restoration	1
5.	Dental surveyor (types and use) in planning of removable partial denture.	1
6.	Basic elements of the removable partial denture: major connectors, minor connectors, and rests.	1
7.	Basic elements of the removable partial denture: clasps - use of the BIOS system.	1
8.	Biostatics of the removable partial denture – planning in different topographical situations (Kennedy's classifications).	1
9.	Removable partial denture as a part of the fixed-removable restoration – dental attachments: attachments, bars and telescopic crowns.	1
10.	Clinical procedures in a fabrication of the removable partial denture: mouth preparation and impression procedures (anatomical and functional impressions).	1
11.	Clinical procedures in a fabrication of the removable partial denture: fitting the framework in mouth of the patient; establishing jaw/occlusal relationships; use of the facebow and dental articulator.	1
12.	Clinical procedures in a fabrication of the removable partial denture: the arrangement of the anterior and posterior prosthetic teeth in the RPD (tooth color selection, occlusal concepts for RPD).	1
13.	Clinical procedures in a fabrication of the removable partial denture: try-in, completion and delivering the removable partial denture. Laboratory procedures in a fabrication of the RPD (metal Co-Cr framework casting and acrylic resin polymerisation (flasking)).	1

14.	Application of new technologies and materials in planning/designing and manufacturing removable partial denture.	1
15.	Implant-prosthetic therapy of partially edentulous patient	1
	Topics – summer semester	Hours
1.	-	-
2.	-	-
3.	-	-
4.	-	-
5.	-	-
6.	-	-
7.	-	-
8.	-	-
9.	-	-
10.	-	-
11.	-	-
12.	-	-
13.	-	-
14.	-	-
15.	-	-

1 hour = 45 minutes

Seminars

	Topics – winter semester	Hours
1.	-	-
2.	-	-
3.	-	-
4.	-	-
5.	-	-
6.	-	-
7.	-	-
8.	-	-
9.	-	-
10.	-	-
11.	-	-
12.	-	-
13.	-	-
14.	-	-
15.	-	-
	Topics – summer semester	Hours

1.	-	-
2.	-	-
3.	-	-
4.	-	-
5.	-	-
6.	-	-
7.	-	-
8.	-	-
9.	-	-
10.	-	-
11.	-	-
12.	-	-
13.	-	-
14.	-	-
15.	-	-

1 hour = 45 minutes

Practicals

	Topics – winter semester	Hours
1.	- Status and history of partially edentulous patient, analysis of X-rays and study casts – development of therapy plan for partial removable dentures	3
2.	- Planning of the basic parts and components of acrylic and metal partial removable dentures	3
3.	- Knowledge of the course of clinical phases of partial removable denture fabrication	3
4.	- Taking an anatomical (situational) impression in a partially edentulous patient	3
5.	- Cast analysis, drawing boundaries for making individual trays in a partially edentulous patient	3
6.	- Adaptation of the individual tray in a partially edentulous patient	3
7.	- Taking a functional impression in a partially edentulous patient	3
8.	- Control of the working model, planning of the cast base and elements of retention and stabilization of the partial removable denture - use of the dental surveyor	3
9.	- Trying out the fit of the base of the cast partial removable denture in the patient's mouth	3
10.	- Determination of vertical and horizontal jaw relationship in partially edentulous patient	3

11.	- Immediate and transitional partial removable denture	3
12.	- Possibilities of implanto-prosthetic therapy of partially edentulous patient wearers of partial removable denture – additional support/anchorage for partial removable denture	3
13.	- Knowledge of the course of laboratory phases of partial removable denture fabrication (casting of one-piece metal framework and flasking of acrylic resin)	3
14.	- Complications and elimination of complications during wearing partial removable dentures	3
15.	- The procedure for relining a partial removable denture; repair of damage of partial removable denture elements	3
Topics – summer semester		Hours
1.	- Status and history of partially edentulous patient, analysis of X-rays and study casts – development of therapy plan for partial removable denture	3
2.	- Planning of the basic parts and components of acrylic and metal partial removable denture	3
3.	- Knowledge of the course of clinical phases of partial removable denture fabrication	3
4.	- Taking an anatomical (situational) impression in a partially edentulous patient	3
5.	- Cast analysis, drawing boundaries for making individual trays in a partially edentulous patient	3
6.	- Adaptation of the individual tray in a partially edentulous patient	3
7.	- Taking an functional impression in a partially edentulous patient	3
8.	- Control of the working model, planning of the cast base and elements of retention and stabilization of the partial removable denture - use of the dental surveyor	3
9.	- Trying out the fit of the base of the cast partial removable denture in the patient's mouth	3
10.	- Determination of vertical and horizontal jaw relationship in partially edentulous patient	3
11.	- Immediate and transitional partial removable denture	3
12.	- Possibilities of implanto-prosthetic therapy of partially edentulous patient wearers of partial removable denture – additional support/anchorage for partial removable denture	3
13.	- Knowledge of the course of laboratory phases of partial removable denture fabrication (casting of one-piece metal framework and flasking of acrylic resin)	3
14.	- Complications and elimination of complications during wearing partial removable dentures	3

15.	- The procedure for relining a partial removable denture; repair of damage of partial removable denture elements	3
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1 hour = 45 minutes

Obligations that students have on the course

Dental students are obliged to come to class and fulfil entrusted tasks.

Description of the method of evaluation of students work on the course

Dental students are obliged to attend lectures and special clinical exercises. During special clinical exercises, students' theoretical knowledge will be checked through "oral colloquiums" before starting work with patients. At the end of the semester, the student will be evaluated based on knowledge and preparedness on oral colloquiums, relation to patients, teachers, and staff at the Department of Removable Prosthodontics. The grade will have an impact (as a preponderance for a higher or lower grade) on the final oral examination of knowledge. In addition to the mandatory and recommended literature, additional information will be provided to them through e-learning teaching materials (e.g., through the Merlin platform).

Exam

The exam in the subject **Removable Prosthodontics II** consists of the oral part of the exam. During class, students' theoretical knowledge will be checked through oral colloquiums before performing special clinical exercises.

Exam dates

	November	December	January	February	April	May	June	July	August	September
Date s				02.02.- 06.02.2026. 16.02.- 20.02.2026.			08.06.- 12.06.2026. 15.06.- 19.06.2026.	06.07.- 10.07.26.	24.08.- 28.08.20 26.	07.09.- 11.09.2026.

Literature (mandatory)

- Carr AB, Brown DT. McCracken's Removable Partial Prosthodontics. St. Louis: Mosby, 2016.
- The Glossary of Prosthodontic Terms 2023: Tenth Edition. J Prosthet Dent. 2023;130(4 Suppl 1):e1-e3.

Literature (supplementary)

- Phoenix RD, Cagna DR, DeFreest CF. Stewart's Clinical Removable Partial Prosthodontics. Chicago: Quintessence, 2003.
- Chang T-L, Orellana D, Beumer J III. Kratochvil's Fundamentals of Removable Partial Dentures. Chicago: Quintessence, 2019.